Figur 1

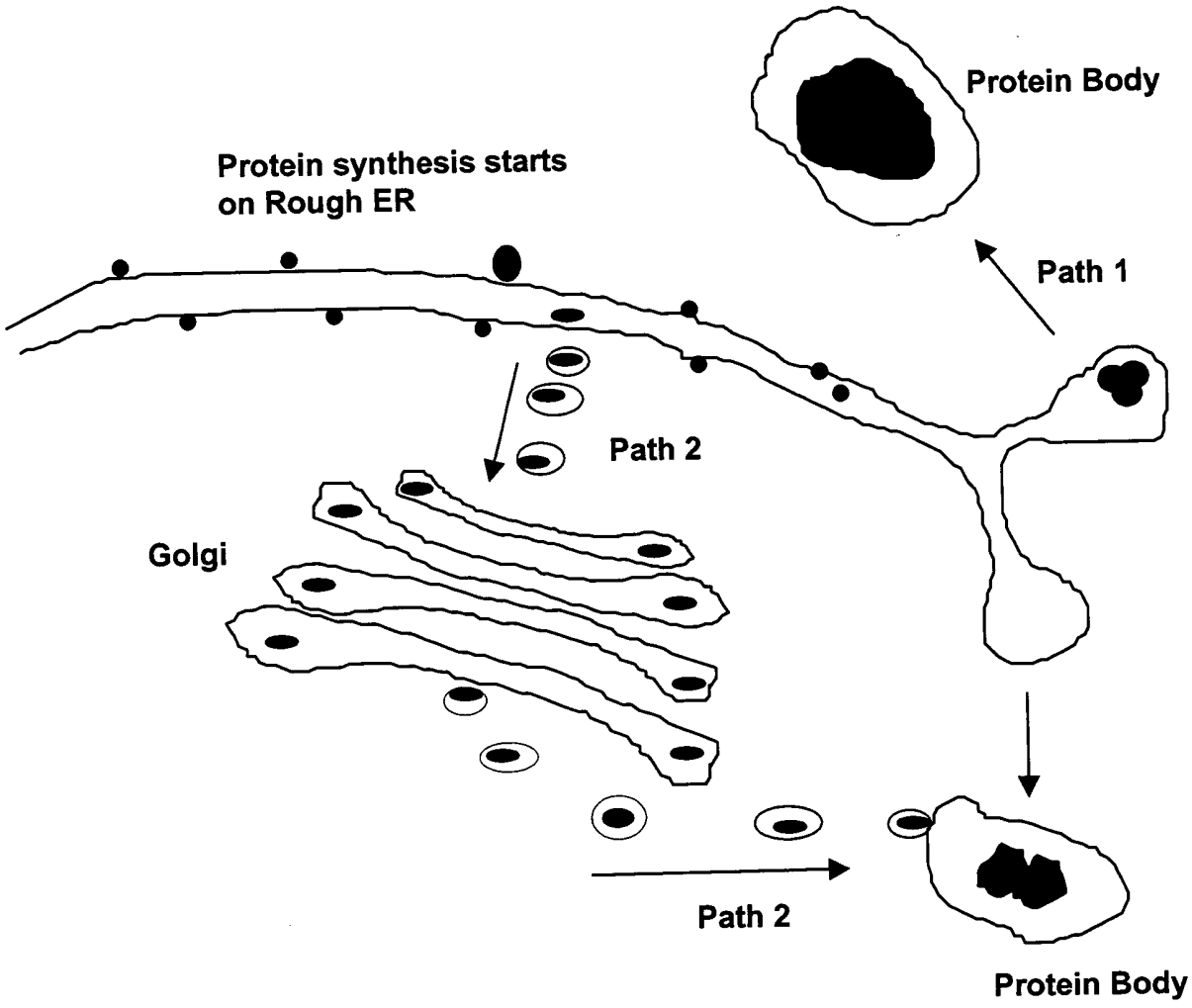

Protein Body
Protein synthesis starts
on Rough ER
Path 1
Path 2
Golgi
Path 2
Protein Body

Figure 2

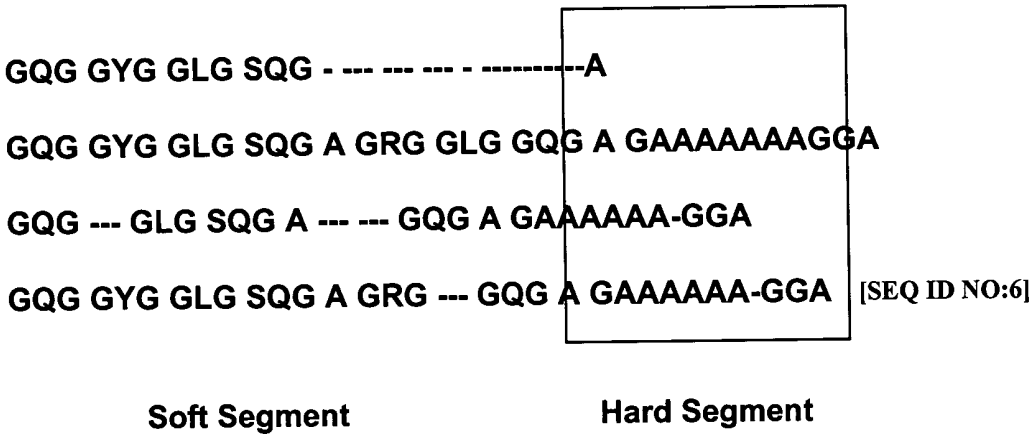

GQG GYG GLG SQG - --- --- --- - ----------A
GQG GYG GLG SQG A GRG GLG GQG A GAAAAAAAGGA
GQG --- GLG SQG A --- --- GQG A GAAAAAA-GGA
GQG GYG GLG SQG A GRG --- GQG A GAAAAAA-GGA
[SEQ ID NO:6]
Soft Segment
Hard Segment

Figure 3

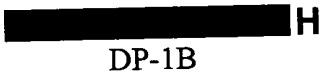
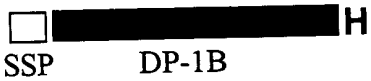
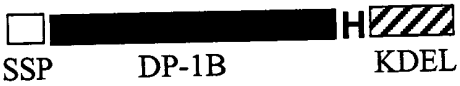
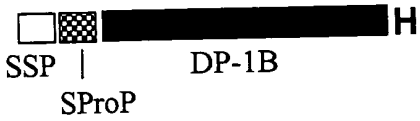
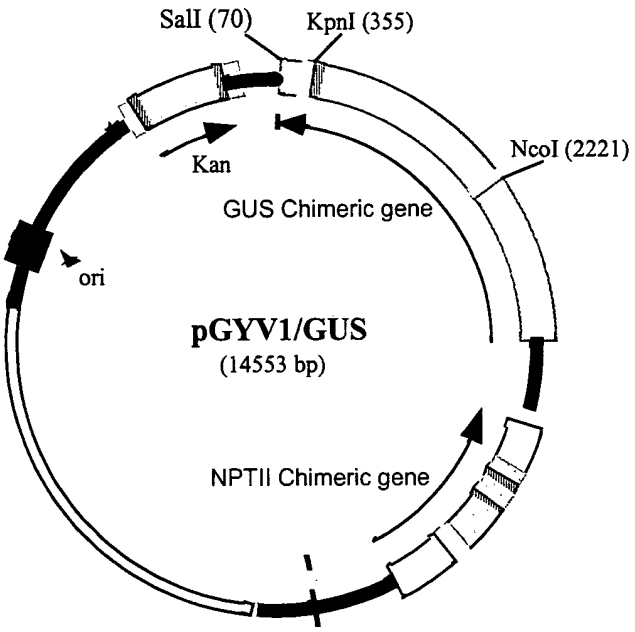
Fusion Protein	Structure	Translocation Target	Carrier Vector
DP-1B		Cytosol	pGY401 pGY411
DP-1Ba		Apoplast	pGYV501 pGYV511
DP-1Be		ER lumen	pGYV502 pGYV512
DP-1Bv		Vacuole	pGYV503 pGYV513

Figure 4

A


SalI (70)
KpnI (355)
NcoI (2221)
Kan
GUS Chimeric gene
ori
pGYV1/GUS
(14553 bp)
NPTII Chimeric gene

B

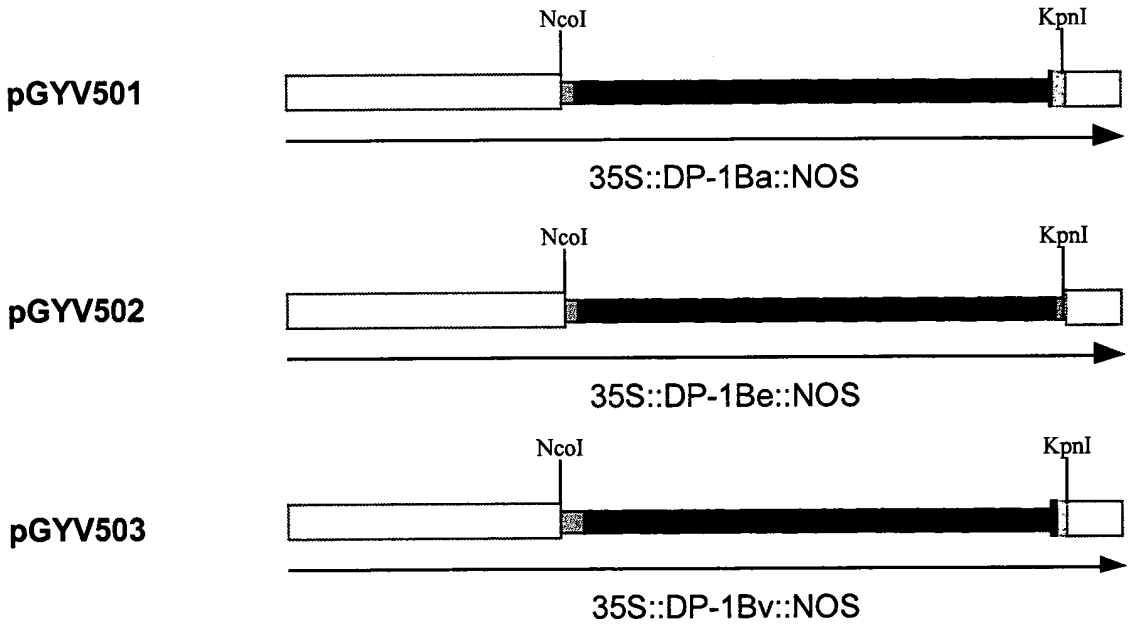

pGYV501
NcoI
KpnI
35S::DP-1Ba::NOS
pGYV502
NcoI
KpnI
35S::DP-1Be::NOS
pGYV503
NcoI
KpnI
35S::DP-1Bv::NOS

Figure 5

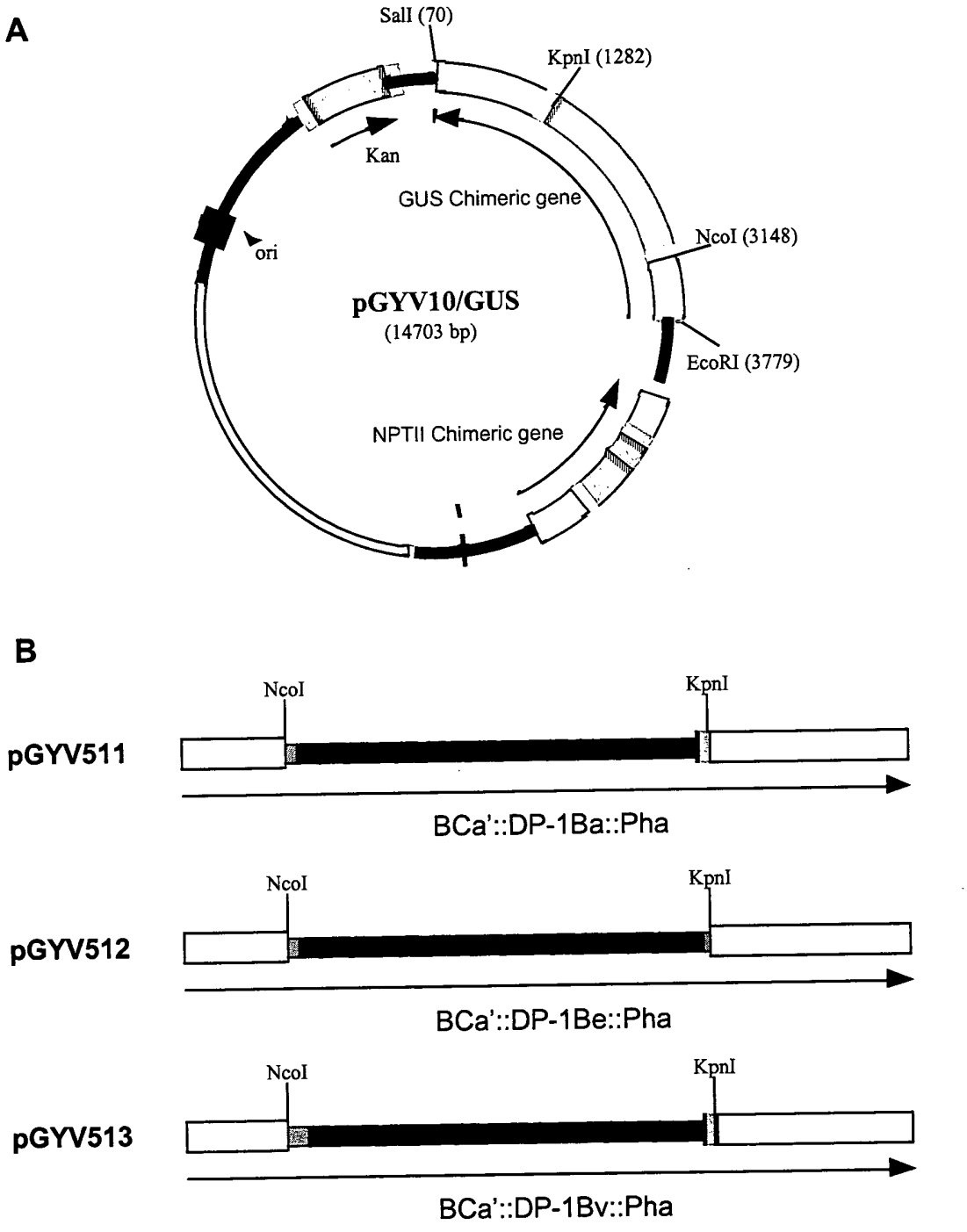
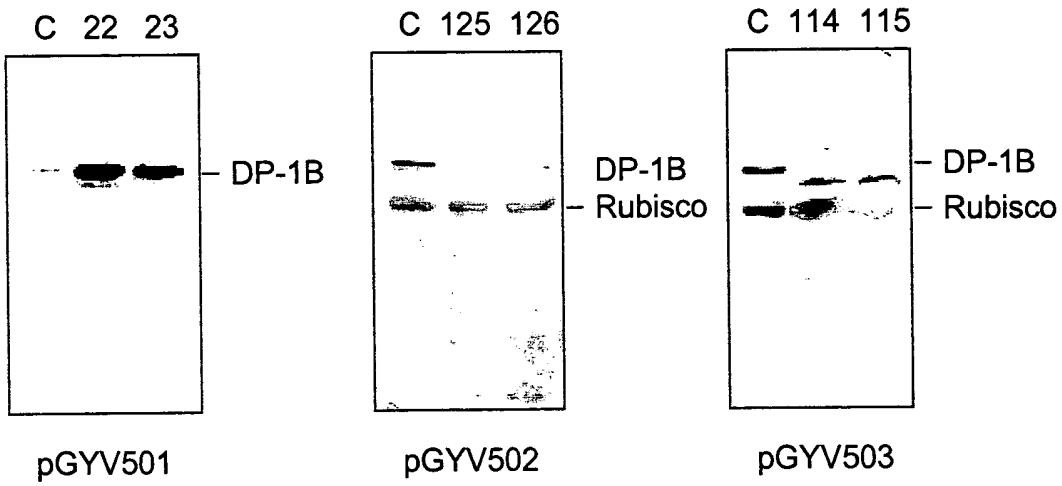

A
SalI (70)
KpnI (1282)
Kan
GUS Chimeric gene
NcoI (3148)
ori
pGYV10/GUS
(14703 bp)
EcoRI (3779)
NPTII Chimeric gene
B
NcoI
KpnI
pGYV511
BCa'::DP-1Ba::Pha
NcoI
KpnI
pGYV512
BCa'::DP-1Be::Pha
NcoI
KpnI
pGYV513
BCa'::DP-1Bv::Pha

Figure 6

A


C 22 23
DP-1B
pGYV501
C 125 126
DP-1B
Rubisco
pGYV502
C 114 115
DP-1B
Rubisco
pGYV503

B

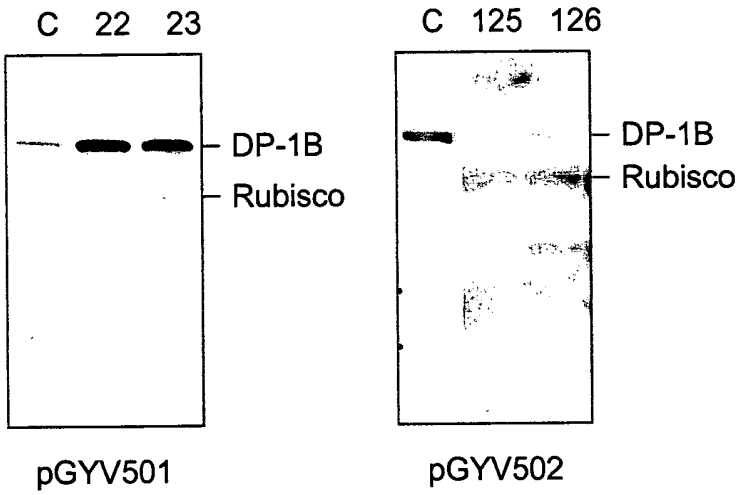
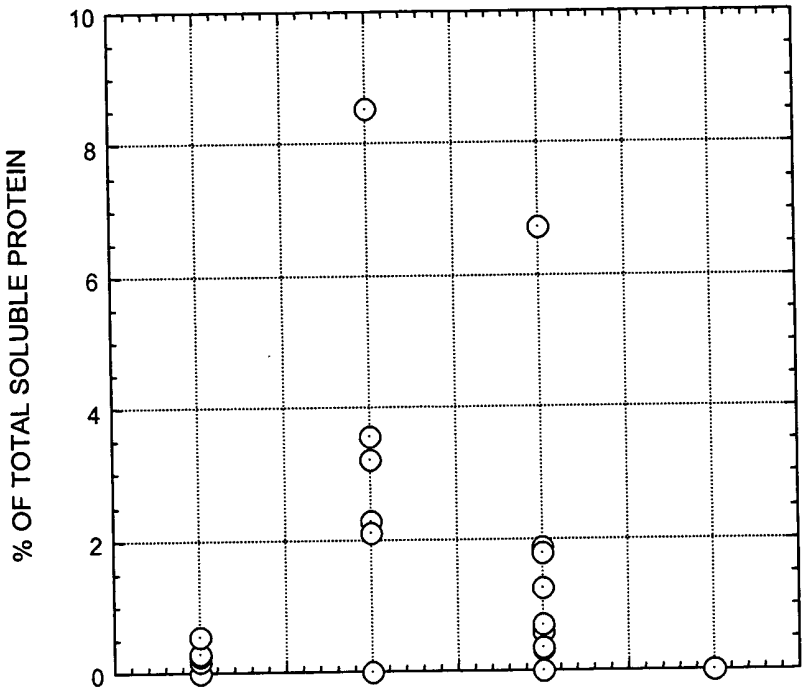
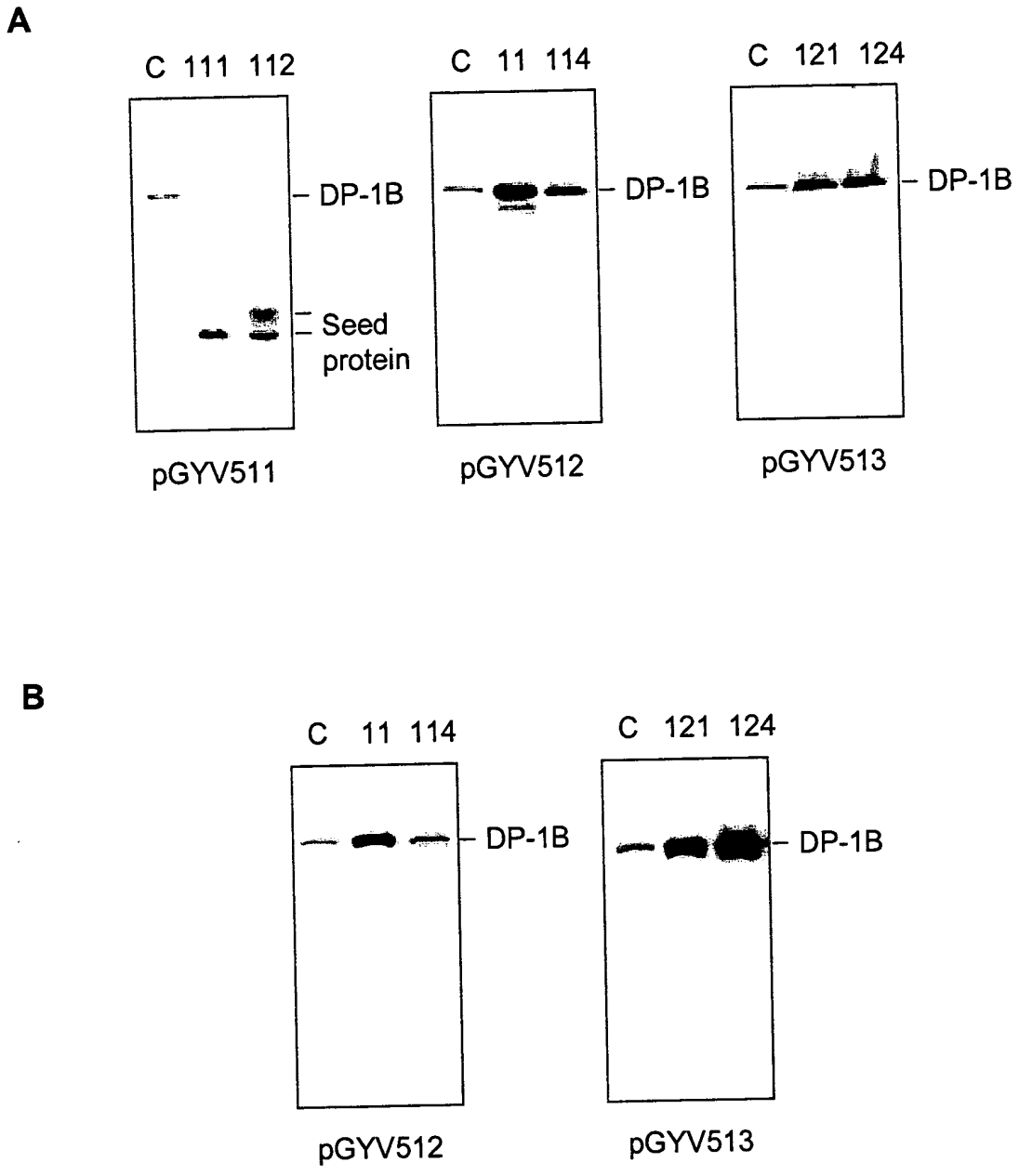

C 22 23
DP-1B
Rubisco
pGYV501
C 125 126
DP-1B
Rubisco
pGYV502

Figure 7

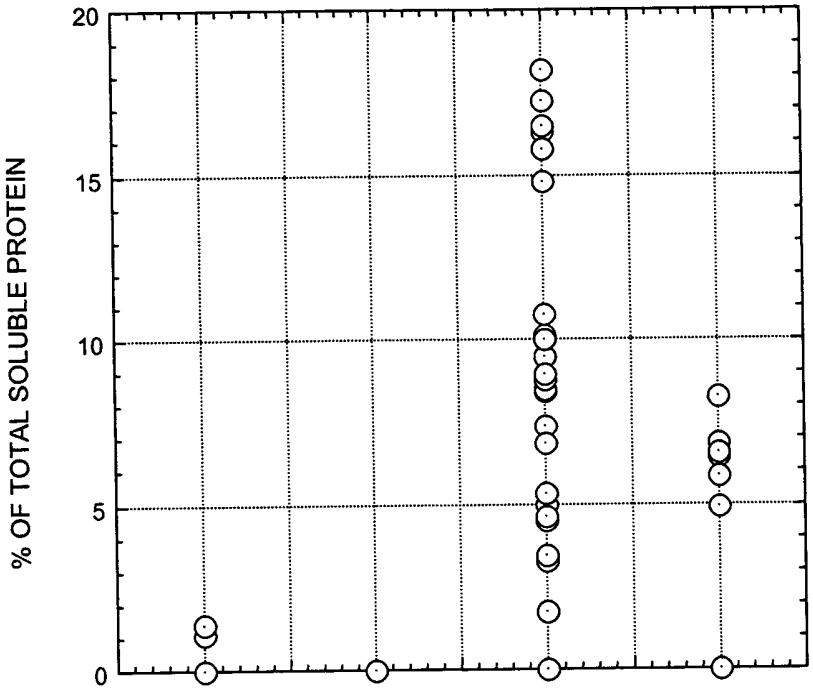


Transformants	pGY401	pGYV501	pGYV502	pGYV503
Fusion Protein	DP-1B	DP-1Ba	DP-1Be	DP-1Bv
Translocation Target	Cytosol	Apoplast	ER lumen	Vacuole
Tested population	16	8	12	23
Average Accumulation	0.18%	2.47%	1.22%	0
STDEV	0.19%	2.85%	1.84%	-
Maximum Accumulation	0.55%	8.53%	6.73%	0

Figure 8

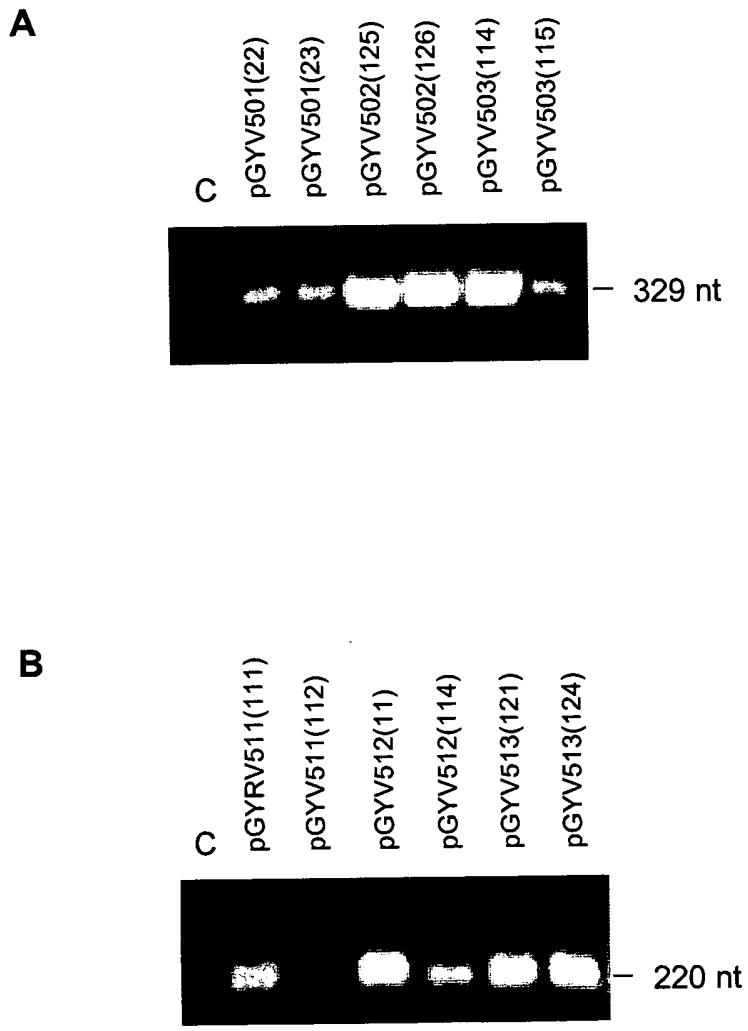

A
C 111 112
DP-1B
Seed protein
pGYV511
C 11 114
DP-1B
pGYV512
C 121 124
DP-1B
pGYV513
B
C 11 114
DP-1B
pGYV512
C 121 124
DP-1B
pGYV513

Figur 9

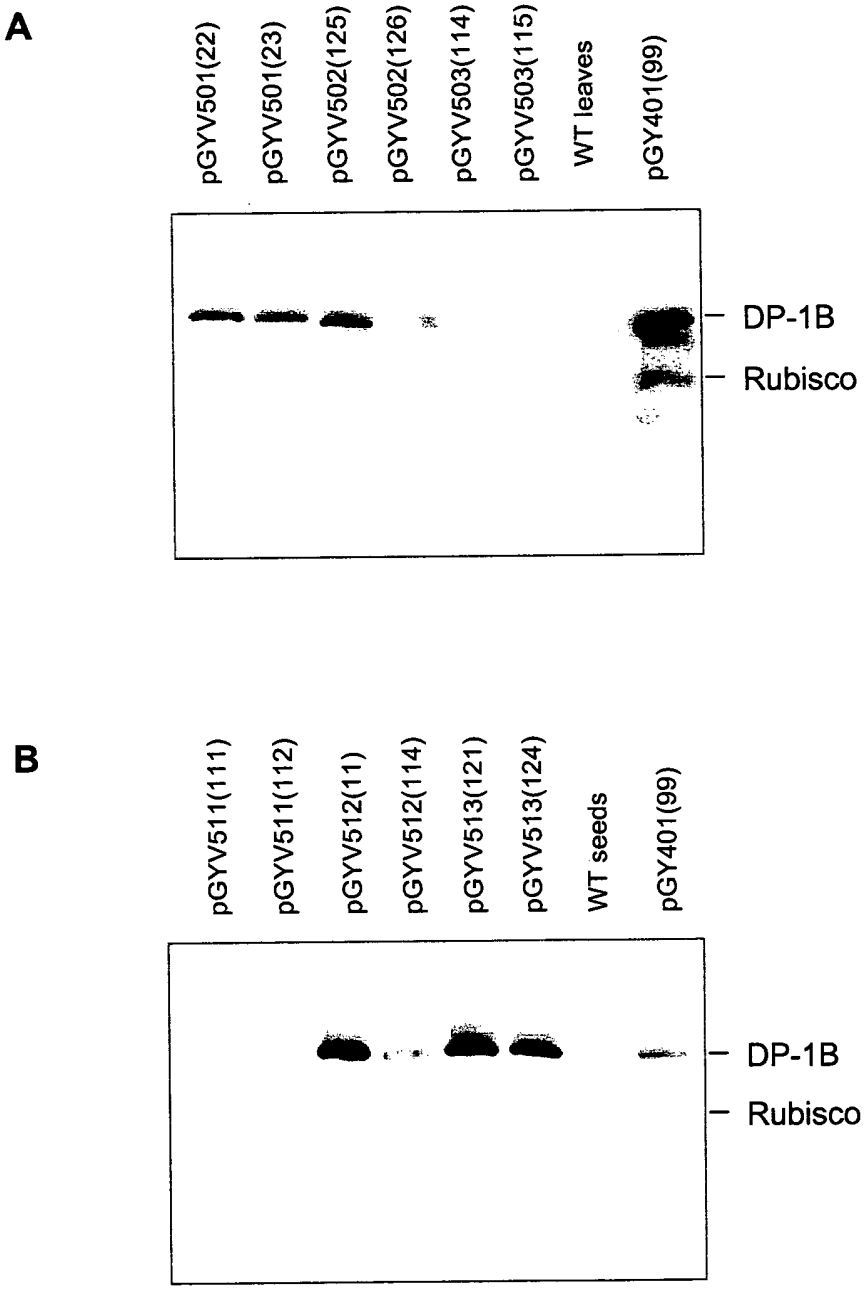


Transformants	pGY411	pGYV511	pGYV512	pGYV513
Fusion Protein	DP-1B	DP-1Ba	DP-1Be	DP-1Bv
Translocation Target	Cytosol	Apoplast	ER lumen	Vacuole
Tested population	17	5	27	7
Average Accumulation	0.28%	0	8.74%	5.55%
STDEV	0.52%	-	5.40%	2.65%
Maximum Accumulation	1.4%	0	18.21%	8.24%

Figure 10


A
C
pGYV501(22)
pGYV501(23)
pGYV502(125)
pGYV502(126)
pGYV503(114)
pGYV503(115)
329 nt
B
C
pGYRV511(111)
pGYV511(112)
pGYV512(11)
pGYV512(114)
pGYV513(121)
pGYV513(124)
220 nt

Figur 11


A
pGYV501(22)
pGYV501(23)
pGYV502(125)
pGYV502(126)
pGYV503(114)
pGYV503(115)
WT leaves
pGY401(99)
DP-1B
Rubisco
B
pGYV511(111)
pGYV511(112)
pGYV512(11)
pGYV512(114)
pGYV513(121)
pGYV513(124)
WT seeds
pGY401(99)
DP-1B
Rubisco